



Product Change Notification - GBNG-12GODC626

Date:

23 Mar 2020

Product Category:

Others; Clock and Timing - Clock and Data Distribution; Clock and Timing - Clock Generation; Clock and Timing - Oscillators

Affected CPNs:**Notification subject:**

CCB 4149 Initial Notice: Qualification of EN-4900GC die attach and G600F mold compound material for selected Micrel products available in 6L SOT-23 package at GTK assembly site.

Notification text:**PCN Status:**

Initial notification

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of EN-4900GC die attach and G600F mold compound material for selected Micrel products available in 6L SOT-23 package at GTK assembly site.

Pre Change:

Using CRM1076DJ-G die attach and G631M mold compound material.

Post Change:

Using EN-4900GC die attach and G600F mold compound material.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	GREATEK ELETRONIC INC.(GTK)	GREATEK ELETRONIC INC.(GTK)
Wire material	Au	Au
Die attach material	CRM1076DJ-G	EN-4900GC
Molding compound material	G631M	G600F
Lead frame material	A194	A194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying EN-4900GC die attach and G600F mold compound material.

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

August 2020

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first



ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	March 2020					->	August 2020				
Workweek	10	11	12	13	14		31	32	33	34	35
Initial PCN Issue Date				X							
Qual Report Availability							X				
Final PCN Issue Date							X				

Method to Identify Change:

Traceability code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:

March 23, 2020: Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_GBNG-12GODC626_Qual_Plan.pdf](#)

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Affected Catalog Part Numbers (CPN)

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QUALIFICATION PLAN SUMMARY

PCN #: GBNG-12GODC626

**Date:
Feb. 20, 2020**

Qualification of EN-4900GC die attach and G600F mold compound material for selected Micrel products available in 6L SOT-23 package at GTK assembly site.

Purpose: Qualification of EN-4900GC die attach and G600F mold compound material for selected Micrel products available in 6L SOT-23 package at GTK assembly site.

<u>Misc.</u>	Assembly site	GTK
	BD Number	Various
	MP Code (MPC)	UGNA1SC8XA12
	Part Number (CPN)	PL671-01-R45TC-R
	MSL information	1
	Assembly Shipping Media (T/R, Tube/Tray)	T&R
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTHAI
	CCB No	4149
<u>Lead-Frame</u>	Paddle size	41X72 mils
	Material	A194
	DAP Surface Prep	100% Ag plating
	Treatment	none
	Process	Stamped
	Lead-lock	none
	Part Number	11-04026-004-C
	Lead Plating	Yes
	Strip Size	250*70 mm
	Strip Density	576 units/strip
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	EN-4900GC
	Conductive	Conductive
<u>MC</u>	Part Number	G600F
<u>PKG</u>	PKG Type	SOT-23
	Pin/Ball Count	6L

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5			SOT-23 6L	Standard Pb-free solderability is the requirement.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5			SOT-23 6L	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5			SOT-23 6L	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30		5			SOT-23 6L	
Lead Integrity	JESD22 B105	5	0	1	5	0 (No lead breakage or cracks)	5			SOT-23 6L	10 leads from each of 5 parts. Not required for SMD, only required for through-hole.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5			SOT-23 6L	
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level (MSL1 260c) + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C.	231	15	3	738	0	15	GTK	MTHAI	SOT-23 6L	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	GTK	MTHAI	SOT-23 6L	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
UHAST	+130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	GTK	MTHAI	SOT-23 6L	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at room temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	GTK	MTHAI	SOT-23 6L	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.